

# Soviet Union Pushes Construction of Second Trans-Siberian Railroad

Secret BGI RP 75-1 July 1974

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#### SUMMARY

The USSR has solicited Japanese assistance in construction of the eastern part of a second Trans-Siberian Railroad. Japanese reactions so far are negative -- reflecting the great cost, the difficulties and unknowns of construction, and the belief that the natural resources offered in exchange would not be sufficient or timely enough to warrant the outlay. In addition, the political/strategic implications of an alternate trunkline are troublesome. Even so, the Japanese may be tempted to explore the matter further and may seriously consider participation in segments of the project on the chance that the USSR might want their help badly enough to agree to return the southern Kuril Islands. Japan would be responsive to any show of US interest. A second Trans-Siberian railroad is a longstanding objective of the Soviet Government, with both economic and strategic benefits, and over the long haul it will probably be constructed with or without foreign assistance in spite of enormous engineering problems anticipated in the rugged mountainous terrain of East Siberia.

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Central Intelligence Agency Directorate of Intelligence July 1974

# SOVIET UNION PUSHES CONSTRUCTION OF SECOND TRANS-SIBERIAN RAILROAD

- 1. In March 1974, Leonid Brezhnev proposed a major new project in the prolonged Soviet effort to induce Japanese participation in the development of Siberia. At a meeting with executive members of the Japanese-Soviet Economic Committee and other Japanese business leaders, he called for the construction of a railroad to connect the railhead at Ust'-Kut, on the Lena River, with the Pacific port of Sovetskaya Gavan'. The new line, traversing underdeveloped and sparsely settled regions of East Siberia and the Soviet Far East north of the existing Trans-Siberian Railroad, would be a substitute for the previously proposed oil pipeline from Irkutsk to Nakhodka. (See map following text.) Japan's part in the proposed construction scheme is the provision of 3 billion dollars, including technological assistance. In return the Japanese would be assured of 25 million tons of Tyumen' crude oil annually after 1985.
- 2. From the Soviet point of view, a second Trans-Siberian railroad would fulfill vital economic and strategic goals. Although the vast new Siberian territories along the route are not suitable for extensive farming or manufacturing, the railroad would provide access to huge deposits of coal, iron ore, natural gas, oil, and timber. The new line would also provide an alternate east-west route capable of alleviating the traffic congestion on the Trans-Siberian Railroad. More important than the economic aspect, however, is its strategic significance: it would provide the Soviet Union with an

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alternate supply line 150 to 805 kilometers (93-497 miles) north of the existing railroad in the event of future hostilities in the Far East. The vulnerability of the frontier-hugging Trans-Siberian is a longstanding concern of the Soviet Union.

- 3. The planning of a second Trans-Siberian railroad dates from 1930, when the Council of People's Commissars (Sovnarkom) approved construction of a railroad from Lake Baykal across the rugged mountainous terrain of East Siberia to the Amur River. This proposed railroad was known as the Baykal-Amur Magistral' or BAM. Surveying of the route was under way in 1934, and actual construction began in 1939.
- 4. The ambitious project was interrupted by World War II, when labor -- both forced and free -- was needed for other purposes. The war, however, renewed Soviet concern about the vulnerability of the Trans-Siberian Railroad to enemy attack. It came as no surprise, therefore, that after the war the Soviet Union employed Japanese POW's to build the eastern and western extremities of the Baykal-Amur railroad. These completed sections traversed relatively moderate terrain in the west, from Tayshet to Ust'-Kut, and in the Far East, from Duki to Komsomol'sk-na-Amure and Sovetskaya-Gavan'. The death of Stalin, the emergence of a temporarily friendly Communist China to the south, and the prospect of prohibitive costs in money, time, and labor, however, brought the BAM project to a halt in the late 1950's. Emphasis then shifted to the exploitation of the virgin lands and of Western Siberia's sizable oil and gas resources.
- 5. Tokyo has reacted with caution to recent Soviet attempts to involve the Japanese in the development of Siberia, particularly in the construction of a second Trans-Siberian railroad. The Japanese question the potential of Siberian oil and coal resources to repay them for their involvement in the railroad project. The Japanese Government is also keenly aware of the military and political advantages to the USSR of an alternate rail route to the Far East. This awareness has been heightened by Chinese concern that the new Trans-Siberian would serve as a military supply route in the event of China-USSR hostilities. Japan's reluctance to accept the costly rail proposal is also influenced by the lack of progress it has made

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in peace negotiations with the USSR, including discussion of the return to Japan of four of the Kuril Islands, and by the still undetermined position of the United States toward major joint development projects in Siberia and the Soviet Far East.

- 6. The railroad currently proposed to the Japanese is in fact the eastern segment of a project to provide an alternate route to the Trans-Siberian all the way from Surgut, in West Siberia, to the Pacific. Construction of the western segment probably will not be undertaken until the eastern is completed. Its lesser priority reflects the existence of an oil pipeline from Surgut to Tayshet, the construction of a second pipeline, and the relative security of the Trans-Siberian Railroad, which in that part of the USSR is located far from the Chinese border.\*
- 7. The eastern segment, currently referred to in news media and intelligence traffic as the Second Trans-Siberian Railroad, would probably extend some 2,350 kilometers (1460 miles) to connect the railhead at Ust'-Kut (oil and iron ore) with Nizhneangarsk, Muya, Ust'-Nyukzha (copper), Tyndinskiy (coal), Byssa, Urgal (coal), and Duki, railhead of a line leading to Komsomol'sk-na-Amure and Sovetskaya Gavan'. The most probable alignment would closely follow the abandoned BAM project along river valleys and through difficult mountainous terrain. A less likely alternate would extend northeastward from Ust'-Kut down the Lena River to Ivanushkova, and then wind southeastward over extremely difficult mountainous terrain to Bodaybo, Chara, Ust'-Nyukzha, Chul'man, and ultimately to the Dugda River. The alternate alignment is 117 kilometers (73 miles) longer than the preferred alignment and crosses much more difficult terrain. Along either route construction would be impeded by unstable ground and by extensive areas of permafrost.

<sup>\*</sup> The projected alignment of the western segment begins in the Tyumen' oil and gas region. It runs from Surgut, on the Ob' River, for some 2,250 kilometers to the recently completed Ust'-Ilimsk hydroelectric complex on the Angara River. The railroad would mainly follow the valleys of the Ob', Ket', and Angara Rivers and would connect with the recently completed line from Ust'-Ilimsk to Khrebtovaya and Ust'-Kut.

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8. The alignment of the most probable route can be divided into seven sections:

## a. Ust'-Kut -- Nizhneangarsk (Lake Baykal)

Sector length: 263 km (163 miles). Follows valleys of the Lena, Niya, Kirenga, and Kunerma Rivers. Between the Lena and Kirenga Rivers the line traverses the Leno-Angarskoye Plato, on which elevations reach 1,058 meters (3,471'). East of the Kirenga River the route must negotiate the Baykal'skiy Range, where elevations exceed 2,300 meters (7,546'). It will most likely cross through the Davan Pass.

## b. Nizhneangarsk -- Muya (Vitim River)

Sector length: 390 km (242 miles). Will probably follow the Verkhnyaya Angara Valley to Kammiokan, then continue along the valleys of the Yanchuy, Muyakan, and Muya Rivers. It must cross two mountain ranges, the Severo-Muyskiy and the Muyakanskiy, whose elevations range from 2,040 meters (6,693') to 2,350 meters (7,710').

## c. Muya -- Ust'-Nyukzha (Olyokma River)

Sector length: 395 km (245 miles). Will probably traverse the rugged Udokan Range, mainly following the valleys of the Kuanda, Chara, Kurung-Yuryakh, Khani, and Olyomka Rivers. Some tunneling will be required in cutting through four ranges that reach elevations as high as 2,515 meters (8,251').

### d. <u>Ust'-Nyukzha</u> (Olyokma River) -- Tyndinskiy (Tynda River)

Sector length: 250 km (155 miles). Follows the Nyukzha Valley for two-thirds of the way and then proceeds along the Verkhnyaya Larba and Getkan Rivers to Tyndinskiy. Some bog conditions are encountered in the Larba River basin.

## e. Tyndinskiy (Tynda River) -- Byssa (Selemdzha River)

Sector length: 560 km (348 miles). Skirts the northern slopes of the Tukuryngra and Soktakhan Ranges, following the course of the Ginlyuy, Ilikon, and Bryanta Rivers. Elevations range up to 1,000 meters (3,280'). Some 75 kilometers (47 miles)

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east of Zhurban, the route swings to the southern slopes of the Dzhagdy Range. It skirts the range, running along the Tuksi River, and eventually turns southward to follow the Dugda and the Selemdzha Rivers to Byssa.

## f. Byssa (Selemdzha River) -- Urgal (Urgal River)

Sector length: 230 km (143 miles). Runs initially through relatively level terrain, following the Byssa River for some 65 km (40 miles) to the settlement of Bezymyannyy. Beyond Bezymyannyy the sector crosses the Turana Range; average peak elevations of 1,200 meters (3,940') would require considerable tunneling. Along much of the trans-mountain stretch the sector follows the Keveli and Niman Rivers to Ust'-Niman, from which it proceeds to the Urgal coal fields.

## g. Urgal (Urgal River) -- Duki (Amgun' River)

Sector length: 270 km (168 miles). Traverses the rugged Bureinskiy Range, where elevations reach 1,303 meters (4,275'), to reach the Amgun' River valley at the settlement of Mogdy and follows it for some 190 km (118 miles) to Duki. The Mogdy-Duki sector will probably follow a previous railroad bed that was under construction in the early 1960s.

9. The alternate alignment between Ust'-Kut and the Dugda River northwest of Byssa comprises six sections:

## a. Ust'-Kut -- Ivanushkova

Sector length: 350 km (217 miles). Leads northward from the railhead at Osetrovo (Ust'-Kut) along the Lena River through Kirensk to Ivanushkova. The valley, shifting in width and orientation, has steep slopes that would require a considerable engineering effort for railroad construction.

## b. <u>Ivanushkova -- Bodaybo</u>\*

Sector length: 230 km (143 miles). Traverses part of the Severo-Baykal'skoye Highland, where elevations range from 500

<sup>\*</sup> A possible variant of the alternate alignment originates at Nezhneangarsk and leads directly to Bodaybo.

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meters (1,640') to 1,118 meters (3,668'), crosses the Malaya and Bol'shaya Chuya Rivers, and then proceeds along the Vitim River.

## c. Bodaybo -- Chara (Chara River)

Sector length: 340 km (211 miles). For approximately half of its length, the sector will logically follow the winding narrow valley of the Vitim River to the settlement of Oron. From this point it must negotiate the rugged Delyun-Uranskiy and Kodar Ranges, where elevations range from 2,400 meters (7,875') to 2,999 meters (9,839'); construction of this stretch will necessitate a considerable engineering effort.

### d. Chara -- Ust'-Nyukzha

Sector length: 200 km (124 miles). The railroad must negotiate the rugged Udokan Mountains. Parts of the sector, however, could skirt small mountain streams like the Kurung-Yuryakh, Khani, and Olyokma Rivers. Elevations throughout are high, ranging from 1,542 meters (5,059') to 2,515 meters (8,251').

## e. Ust'-Nyukzha (Olyokma River) -- Chul'man

Sector length: 205 km (127 miles). This mountainous sector is almost devoid of east-west oriented river valleys. Crossing the Stanovoy Mountains (average elevation 1,800 meters or 5,900') would require considerable engineering work.

## f. Chul'man -- Dugda River

Sector length: 525 km (326 miles). Includes the rugged Sutamo-Gonamskiy and the Dzhagdy Mountains, whose highest elevations average 1,750 meters (5,740') and 1,450 meters (4,750') respectively, as well as part of the multistreamed Zeya River Basin. Construction in this sector would demand a considerable effort.

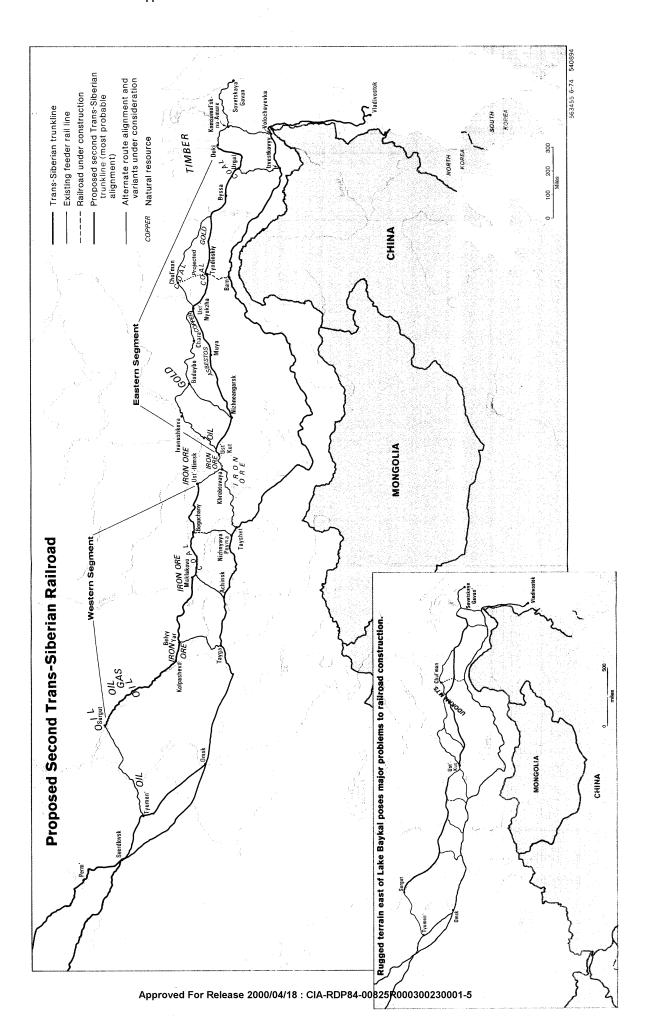
10. Recent Soviet-Japanese negotiations on the railroad issue have highlighted Japanese reservations about involvement in a construction project of such magnitude. Japanese experts

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and officials view the Soviet plan as too grandiose, and feel that in spite of their construction experience in mountains and their super-express railroad technology, construction of a railroad in the rugged Siberian terrain and climate would be extremely difficult. Even if it were done, Japanese experts believe that an annual rail shipment of 25 million tons of Tyumen' oil to Japan could not be achieved before 1990, by which time Japan should be able to achieve breakthroughs in the use of alternate sources of energy.

- 11. Japanese concern over becoming entangled in a lengthy and extremely costly railroad venture is well founded. The Soviet schedule for completion of the proposed second Trans-Siberian by 1985 seems unrealistic, particularly when it is compared to an earlier Soviet undertaking. The Abakan-Tayshet line, covering 708 kilometers (440 miles) through the rugged Eastern Sayan Mountains, but requiring only nine tunnels with an aggregate length of 6 miles, took 7 years to build -- in spite of high priorities and a major construction effort. It is reasonable to conclude, therefore, that a railroad as long as the proposed second Trans-Siberian could easily require 15 to 20 years to complete. By that time allweather highways and pipelines could be built to open up the resource-rich areas. The Japanese railroad investment would thus turn out to be largely a strategic contribution to the Soviet Union.
- 12. It is possible that present attitudes in Tokyo could be swayed to accept all or parts of the Soviet proposal should the return of the Kuril Islands be promised or should U.S. participation in the construction scheme become likely. Japan's most recent agreements to finance the development of coal, gas, and timber resources in the Soviet Far East also suggest that the USSR might induce the Japanese to underwrite a significant segment of the proposed Siberian trunkline, from Chul'man to Duki as well as the connecting link from Chul'man to the future Tyndinskiy railhead. It is also highly probable that the Soviet Union can and probably will go on alone in building the proposed second Trans-Siberian trunkline if Japan withholds financial and technical cooperation.

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